ABSTRACT:

This paper discusses the derivation of an explicit cosine-Taylorlike method for solving stiff ordinary differential equations. The formulation has resulted in the introduction of a new formula for the numerical solution of stiff ordinary differential equations. This new method needs an extra work in order to solve a number of differentiations of the function involved. however, the result produced is better than the results from the explicit classical fourth-order runge-kutta (rk4) and the implicit adam-bashforth-Moulton (abM) methods. When compared with the previously derived Sine-Taylorlike method, the accuracy for both methods is almost equivalent.